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The
**NATIONAL ASSOCIATION
of CORPORATION SCHOOLS**

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Volume III

MAY 2 1916
May, 1916

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Association Activities

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United Cigar Stores Training School

**Educational Work of the Atchison, Topeka
and Santa Fe Railway Company**

By F. W. Thomas—Supervisor of Apprentices Motive Power Department

Train Senses in High Schools

By Dr. Charles W. Eliot

Teach Child Life and Not Latin

By Dr. Abraham Flexner

Training for The Foreign Field

By W. H. Lough

**PUBLISHED BY ORDER OF THE
EXECUTIVE COMMITTEE**

The National Association of Corporation Schools

Headquarters, Irving Place and 15th Street, New York City

Objects

Corporations are realizing more and more the importance of education in the efficient management of their business. The Company school has been sufficiently tried out as a method of increasing efficiency to warrant its continuance as an industrial factor.

The National Association of Corporation Schools aims to render new corporation schools successful from the start by warning them against the pitfalls into which others have fallen, and to provide a forum where corporation school officers may interchange experiences. The control is vested entirely in the member corporations, thus admitting only so much of theory and extraneous activities as the corporations themselves feel will be beneficial and will return dividends on their investment in time and membership fees.

A central office is maintained where information is gathered, arranged and classified regarding every phase of industrial education. This is available to all corporations, companies, firms or individuals who now maintain or desire to institute educational courses upon becoming members of the Association.

Functions

The functions of the Association are threefold: to develop the efficiency of the individual employee; to increase efficiency in industry; to have the courses in established educational institutions modified to meet more fully the needs of industry.

Membership

From the Constitution—Article III.

SECTION 1.—Members shall be divided into three classes: Class A (Company Members) Class B (Members), Class C (Associate Members).

SECTION 2.—Class A members shall be commercial, industrial, transportation or governmental organizations, whether under corporation, firm or individual ownership, which now are or may be interested in the education of their employees. They shall be entitled, through their properly accredited representatives, to attend all meetings of the Association, to vote and to hold office.

SECTION 3.—Class B members shall be officers, managers or instructors of schools conducted by corporations that are Class A members. They shall be entitled to hold office and attend all general meetings of the Association.

SECTION 4.—Class C members shall be those not eligible for membership in Class A or Class B who are in sympathy with the objects of the Association.

Dues

From the Constitution—Article VII.

SECTION 1.—The annual dues of Class A members shall be \$50.00.

SECTION 2.—The annual dues of Class B members shall be \$5.00 and the annual dues of Class C members shall be \$10.00.

SECTION 3.—All dues shall be payable in advance and shall cover the calendar year. Any members in arrears for three months shall be dropped by the Executive Committee unless in its judgment sufficient reasons exist for continuing members on the roll.

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The National Association of Corporation Schools

Bulletin

Published by Order of the Executive Committee
Edited by F. C. Henderschott, Executive Secretary

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May, 1916

No. 5

THE PERSONAL FACTOR IN INDUSTRY

Writing in the *Valve World*, a house organ published by The Crane Company of Chicago, the editor, Justin W. McEachren, defines broadly a policy for what has come to be known as the fifth sub-division in industrial corporation management—"employe relations."

There is a growing recognition of the importance of the personal factor in business organizations. Mechanical divisions of industry have received much attention during the past twenty to thirty years and the development along these lines has been relatively satisfactory.

The machinery in use in America industry is modern and efficient. Equipment in general may be said to be the equal of industrial equipment anywhere but the personnel of American industry is not the equal of that to be found in several of the leading nations with which the United States must compete industrially. The efficiency of the individual employe is a problem quite separate and distinct from that of efficiency of equipment. Unfortunately this fact has not as yet been fully sensed. Its solution demands entirely different treatment than that which has proven effective in raising the standard of equipment.

Mr. McEachren well defines the problem in his editorial which is here reproduced:

"There are two ways of promoting general efficiency—that is, of developing intelligent 'team work.' One is through a centralizing of authority and direction in which the units act as parts of a carefully devised machine. The other is through friendly co-operation and interest in which the units maintain their independence and initiative. We believe the latter to be the only way by which collective efficiency can be developed and maintained in this country. To make the efficiency of individuals effective in the mass we must turn to co-operation not only among

employees but between employees and employers. The employer does not do his whole duty in encouraging efficiency when he pays his employees good wages for their effective labor. He must show his employees unmistakably that he is distinctly friendly toward them, that he is personally interested in their welfare, that at no point may a line be drawn between him and those who work for and with him. The wise employer will take his employees rather freely into his confidence. He will make them feel that they are an integral part of his business and an indispensable factor in his success. The employees will not be treated as 'hired men' but as coworkers with the employer in friendly combination for the success and prestige of the business. Efficiency without this friendliness, this warm personal interest between employer and employees, always will be an uncertain quantity; while efficiency coupled with hearty and frank co-operation cannot fail to meet any of the demands that new trade conditions are practically certain to make upon the industry and commerce of the United States in the days that even now are close upon us."

VOCATIONAL GUIDANCE

Vocational Guidance is unquestionably one of the most prominent problems of the present period. The article originally published in the *Unpopular Review* and reproduced last month by courtesy of Henry Holt, its publisher, has caused considerable comment. The article was written by Dr. Burtis B. Breese, Professor of Psychology, at the University of Cincinnati. It is considered an unusually good review of the situation as at present understood.

INDUSTRIAL PREPAREDNESS THE GREATER PROBLEM

In a recent address at the University of London, Viscount Haldane, formerly Secretary of War for Great Britain, said:

"Great Britain and her allies will face a new peril after the present conflict in an industrial war for which Germany has long been preparing by the creation of a new and formidable class of highly skilled workmen.

"I want to sound a warning of what is in store for us," he asserted. "I am more afraid of an engine for conquest in peace time, which the Germans were busy preparing before the war, than I am of the 42-centimetre guns. Germany is training the

youth of the land in special skilled trades to outdistance competitors throughout the world."

The military conflict now raging in Europe must sooner or later come to a close, but the trade war which will follow will have even a greater bearing on the future growth and prosperity of the various nations involved and what is of even greater consequence, it will have an equal bearing upon the future growth and prosperity of the United States. This is one phase of the European situation which the United States cannot escape. We shall probably be able to maintain neutrality during the armed conflict but the United States must become a vital factor in the struggle for supremacy among the industrial nations. Military preparedness is unquestionably of great importance but industrial preparedness is of even greater importance.

DEVELOPING AN EDUCATION FOR THOSE AT THE BOTTOM

One of the most interesting developments in connection with the movement for broader and better education with special reference to industrial and agricultural training is the changing attitude of the pedagogue whose work has been confined largely, if not entirely, to academic instruction.

Mr. Frank F. Frederick, Director of the Trenton, N. J., School of Industrial Arts, in a recent article comments on this feature of our educational system. Mr. Frederick says:

"It now seems strange, in view of the present knowledge of what education is and should do, that educational opportunities were first open to those at the top and have only recently been open to those at the bottom.

"For many years, educational opportunities were provided for the wealthy who wished to enter the 'learned professions'—no education was needed by others.

"Later the colleges branched out into universities and offered courses in engineering, agriculture, etc., but these courses were, and still are for those who have the time and the money to leave home and devote at least four years to study.

"For the boys who had to go to work at the age of 14 or 15, and for those who could not afford a university training, there were no opportunities. This was wrong. Leaders for the top were educated, but, for those who really do the world's work, there were but few changes for advancement, and the quality of their product showed the effect of their lack of knowledge.

"Several European nations realized this long before it was realized in this country, but, about 25 or 30 years ago, many of our manufacturing centres awoke to the wisdom of supporting schools in which training for the industries could be secured by those at work during the day and by those who had no money to attend a university or but a limited time to devote to study before going to work."

DETERMINING WHAT SALESMANSHIP IS

Industrial education in the United States has reached that stage of development where both educators and industry are searching for facts upon which to reconstruct the national educational system with full assurance that the system, when perfected, will stand any reasonable test.

There has been much discussion of the subject of salesmanship. What is salesmanship? The word is not to be found in the latest edition of Webster's dictionary. Marketing is as old as we have knowledge of civilization, but salesmanship is a relatively new calling. A movement originating in industry, but centralizing in the Carnegie Institute of Technology at Pittsburgh, promises a solution of the problem. Several of the larger industrial institutions will finance the movement to the extent of \$75,000 for five years. Intensive investigation and study will be carried on under the direction of Dr. Walter Dill Scott, formerly Professor of Psychology in Northwestern University. Carnegie Institute of Technology is supplying a home for the movement and industry has contributed a sum of \$15,000 a year for a period of five years.

Associated with Dr. Scott will be several other psychologists, who are specialists in mental tests. It is the purpose of the bureau to first have a class of employing agents of the various business concerns, and fit them to be able to pick out the best salesmen for their line of work.

THE CURSE OF POLITICS IN EDUCATION

Thomas W. Churchill, retiring president of the Board of Education of New York City, advocated the freedom of the public school system from political manipulation in an address delivered before the Men Principals' Association of that city.

In the discussion of his subject, "Control of the Public

Schools," Mr. Churchill declared that the school work of that city is utterly inadequate and does not serve, as the size and wealth of the city should make it serve, for an example and a model to the country and the world.

"From the establishment of the greater city to the present moment there has persisted, more or less active, in our municipal government an unworkable and damaging assumption that the Department of Education, like the Department of Docks and Ferries, should be considered as a subordinate part of the municipal administration, subject to the same direction, interference and political manipulation.

"In the first Controllershship, after consolidation, this war on the schools began. Teachers' payrolls were dishonored, salaries withheld, the entire line and staff of the department thrown into panic for months at a time. The teachers were driven to Albany for redress and were offered by the State Legislature no less than a score of salary and other bills seeking to preserve the schools from utter demoralization by the Controller's office. Meantime, in speeches and magazine articles, protest was uttered by him against all modern education and demand was made for a return to the type of the sixteenth century."

DEFINING THE OBLIGATIONS OF THE PUBLIC SCHOOLS

Copeland Townsend, Managing Director of the Hotel Majestic, New York City, in a letter to the Chairman of the Committee on Vocational Schools and Industrial Training of the Board of Education of New York, suggests that boys and girls who may desire to enter the hotel business receive preliminary training in the public schools. Mr. Townsend points out that there is probably \$500,000,000 capital invested in New York City hotels and continues to argue that because of this investment and a minimum daily registration of 100,000 persons in the hotels, it is the duty of the public schools to train boys and girls who might enter the hotel business for their work.

"Why could not the city schools," he suggests, "train the scores of young men who are recruited every year or so as cooks in our hotels and restaurants? From \$80 to \$150 a month with board is paid such workers, to my personal knowledge. This is a fair support for an efficient individual. In classes such pupils would learn of the chemistry of cooking, and of kitchen hygiene,

getting a broader and more dignified realization of their vocation of cooking—for cooking is probably our oldest and most necessary science. At present school cooking classes are restricted to girls, if I am correctly informed. Let the city boys have this opportunity to fit themselves for a well-compensated vocation."

The answer to Mr. Townsend's argument is not difficult: If the hotel industry has the right to demand that the public schools train boys and girls in the details of hotel service, every other industry has the right to make a similar demand. The viewpoint is too narrow. If the public schools succeed in training the young minds in the essentials of education they have fairly well met their obligations.

Just how much knowledge of industry can be given in the elementary schools of the country is a problem that is receiving much attention and as yet is unsolved but the answer to Mr. Townsend is that the public schools have other functions than that of merely training and meeting the requirements of the various branches of industry. The pendulum should not be allowed to swing to the other extreme. Our public school system has all but neglected the boy and girl who are to go into industry and there accomplish their life work. This fact is now being generally recognized and corrected and industry must not be too pronounced in its demands or too narrow in its interpretation of what constitutes education.

CONNECTING COMMERCIAL TRAINING WITH PROFITABLE EMPLOYMENT

There is a growing tendency on the part of trade schools to develop a direct connection with business. The educators charged with training boys and girls in commercial subjects feel the necessity of assurance that the students when trained may secure profitable employment. The Manhattan Trade School for Girls has opened a department where practical tests in a variety of industrial processes are made and girls who leave school to go to work, and who have no knowledge for what they are fitted, may get an insight into the requirements of industry, and to give girls who are already at work an opportunity for supplementary training during the dull seasons, when they are unemployed.

Vocational tests are given in order to help each girl find out what she is most interested in and what type of occupation she is most fitted for. Girls are sent for these tests from the ele-

mentary school, from the Board of Health, where they are given their working papers, and from a number of non-commercial employment agencies which are endeavoring to give girls the best possible start in their working lives.

The tests cover:

A. Fundamental trade processes in hand and machine sewing, electric power machine operating, various kinds of pasting and glue work.

B. General intelligence tests to show a girl's readiness to follow directions, carry messages, grasp ideas, etc.

C. Physical tests to determine a girl's fitness for occupations requiring different types of physical strain.

Every effort is made to help girls to see the desirability of entering vocational schools or courses that will best develop their aptitudes. Those who are insistent upon going immediately to work are directed to employment agencies co-operating with the extension rooms, who will endeavor to find suitable places for them.

Girls who have had some experience in trade and are temporarily out of work may come for training along the lines of their occupation until they secure another position. Girls who need practice for the dressmaking trade are given instructions in finishing, fine hand sewing, smocking, lining cutting, elementary draping. Girls who would like experience in power machine operating can have either the lock-stitch machine, the chain-stitch, freehand, or knife tucking, hemstitching, zig-zag, and cording attachment. The instructions are given individually and every girl who comes is taught something which will help her to advance in her trade work.

GIVING THE CHILD THE LARGER PHILOSOPHY

Just what training a child should receive to insure a development as great as the inherent qualities, both physical and mental, make possible, is a problem that is attracting the attention of many able educators. Professor Charles Zueblin, in a recent address before the Brooklyn Institute of Art and Science, treated this subject rather broadly:

"The education of the sequestered monk would not suit the free American boy," the speaker declared. "By merely teaching him a trade or profession the boy cannot be fitted 'for occupation in the ever bigger world.'

"Hence," said Professor Zueblin, "the school must be co-operative, not competitive. Training for character will be secured not so much by catechism and discipline as by the exposition of the meaning of harmony.

"The whole nature of the child must expand by reaching out for the whole content of the universe. He must get a world-philosophy. He must come into harmony with Nature, man and God. He will reach Nature through science, man through art and God through life. Science will mean to him not the laboratory, but the world. He will live and learn and work out of doors. He will come into assured harmony with Nature if he has health, taken in its whole meaning: physical, mental and spiritual. Man is revealed by the work of his hands; the history of civilization is written in architecture. The pupil will come into harmony with God not by theological instruction, but by entering into the universal and comprehensive, even if too young to grasp the riddle of the universe. He will not be content with the knowledge of his own accomplishments or those of others; he will desire to penetrate the mystery of the cosmos and discover the unity of all things."

DOING AND KNOWING

Many persons are capable of doing expert work in their particular line. Realizing their capacity to excel they become peeved when they see others, perhaps not quite as skilful as themselves, advanced to higher positions. They cannot understand the reason why they are ignored. Circumstances such as these often prove discouraging. The worker grows careless and begins to fall behind. In doing this he casts away opportunities which may never again return. In his chagrin he fails to note the reason which brought about the advance of his rival. He has failed to learn that it is not enough that he do his work especially well. He must also know the ethics consistent with higher place. He must have poise, self-control, justice, a tendency to conserve peace and the instinct to teach those under him. Many men and women highly skilled in their particular line have been deposed from high place because they could not get along with those under them. Others fail of promotion for the same reason.—Strawbridge & Clothier "Store Club."

ASSOCIATION ACTIVITIES

CHAIRMAN OF SUB-COMMITTEES PRESENT REPORTS— BUFFALO A CANDIDATE FOR 1917 CONVENTION— MEETING OF COMMITTEE ON ALLIED INSTITUTIONS

The meeting of the Executive Committee on April 4th, in New York, was well attended, President McLeod presiding.

The Executive Secretary presented an invitation from Mr. W. R. Heath, Vice-President of the Larkin Company, asking that our Association hold its 1917 convention in Buffalo as guests of the Larkin Company. After discussion it was decided that final action on this subject be postponed until the June meeting of the Executive Committee, which will be held during the annual convention at Pittsburgh.

The Executive Secretary also presented a letter from the National Trade Association asking for endorsement by our Association of a bill known as the Stephens Price Maintenance Bill. This Bill aims to force retailers to charge consumers the prices fixed by manufacturers. No action was taken in this matter, the Executive Committee adhering to its previous policy that it is outside its province to endorse legislation not originating with the Association.

Mr. Henderschott reported that Mr. George B. Everitt had tendered his resignation as Treasurer, due to the fact that he has been compelled to leave New York indefinitely on account of ill health. After discussion, it was the sense of the Executive Committee that as there is an Assistant Treasurer the absence from New York of Mr. Everitt would not interfere with the work of the Association and, therefore, no action was taken.

An Auditing Committee was appointed, consisting of Mr. F. P. Pitzer, Dr. Lee Galloway and Mr. H. G. Petermann, to audit the books of the Association prior to the annual convention.

Committee Reports

The chairman of sub-committees were requested by the Executive Committee to present their annual reports at the April meeting that same might be accepted and ordered printed and distributed to all members in sufficient time to allow for reading and an analysis before the annual convention.

Mr. F. P. Pitzer, Chairman of the Committee on Employment Plans submitted his report which was approved and ordered printed.

Mr. J. W. L. Hale, Chairman of the Committee on Trade Apprenticeship Schools presented his report, which was approved and ordered printed.

Mr. E. H. Fish, Chairman of the Committee on Public Education, presented his report, which was accepted. Mr. Fish, desiring to further edit his report, will submit final draft to the Executive Secretary within a brief period.

Mr. J. E. Banks, Chairman of the Committee on Unskilled Labor, presented his report, which was accepted and ordered printed.

Dr. Henry C. Metcalf verbally outlined his report and promised to have it in the hands of the Executive Secretary within two weeks. This met with the approval of the Executive Committee.

The Executive Secretary read an advance report from Mr. Sydney W. Ashe, Chairman of the Committee on Safety and Health. Owing to an illness in his family Mr. Ashe reported he had not incorporated final revisions from other members of his Committee and as some of the other members have forwarded suggested changes the matter was referred to the Executive Secretary to take up with Mr. Ashe and arrange for the report being presented in its final form and printed.

Mr. James A. Roosevelt, Chairman of the Committee on Allied Institutions, reported that his Committee would have a final meeting on Thursday, April 6th, after which time he would submit his report. The matter was left between Mr. Roosevelt and the Executive Secretary.

The Executive Secretary read a letter from Mr. J. W. Dietz, Chairman of the Committee on Special Training Schools, in which he stated his report would be ready about the tenth of April. This matter was also left to the Executive Secretary for final action.

Dr. Lee Galloway submitted his report as Chairman of the Committee on Advertising, Selling and Distribution Schools, which report was accepted and ordered printed as soon as Dr. Galloway receives additional parts of the report which are to be prepared by other members of the Committee.

The Executive Secretary submitted a report from Mr. I. S. Adlerblum, acting chairman of the Committee on Office Work Schools. This report was accepted and ordered printed.

The Executive Secretary also presented a report from Mr. J. W. Fisk, Chairman of the Committee on Retail Salesmanship. The report was accepted but the Executive Secretary was requested to ask Mr. Fisk to include a summary of the report, after which the report will be printed.

Public Libraries and Universities Keep in Touch with the Work of Our Association

The following is a list of Public Libraries and Universities that have purchased bound volumes of Proceedings of the Annual Conventions of our Association since the last report made in the April BULLETIN:

LIBRARIES

Free Public Library of St. Joseph—St. Joseph, Missouri.

UNIVERSITIES

University of Kansas—Lawrence, Kansas.

We now have a total of thirty-three public libraries and thirty-nine universities.

Meeting of the Committee on Allied Institutions

On April 7th, the Committee on Allied Institutions met in New York. Mr. James A. Roosevelt, Chairman, presided. Other members present were:

Mrs. Roy E. Fletcher, representing General Federation of Women's Clubs.

Mr. Alvin E. Dodd, representing the National Society for the Promotion of Industrial Education.

Mr. F. C. Henderschott, representing The National Association of Corporation Schools.

There was a general discussion as to how the various institutions, represented in the Committee on Allied Institutions, could co-operate in pressing forward to a clearer and better understanding of the field.

Mr. Dodd spoke of the surveys in Richmond and Minneapolis, also of the work of the Dunwoodie Institute in testing employees.

Mr. Dodd further spoke regarding greater co-operation in working out a scheme so that we would not conflict with the work of any other educational organization. He also said it would be helpful if his Society could say the corporation schools would like to have them do certain things and the corporation schools would, in turn, do certain other things.

Mrs. Fletcher read a brief report outlining the work of the General Federation of Women's Clubs. She said she would like to submit a further report containing more detailed information and said she would endeavor to do so within a week.

Co-operation between vocational societies and the corporation school was discussed.

Mr. Dodd said he would submit a report within the course of a week containing the following suggestions:

First: That a joint committee of the National Society for the Promotion of Industrial Education and The National Association of Corporation Schools be appointed. This committee to interest itself in the vocational educational field. This committee also to act as a clearing-house for some of the things going on in corporation schools.

Second: That delegates be appointed from The National Association of Corporation Schools to attend all gatherings of the National Society for the Promotion of Industrial Education and the National Society in turn appoint delegates to attend all gatherings of The National Association of Corporation Schools.

Third: That in cities where audits and surveys are being made the representatives of The National Association of Corporation Schools get in touch with the members of the Society making the audit, these representatives to act in an advisory capacity and assist in making the surveys.

Mr. Dodd further said that there were two types of audits, namely, city audit and industrial institution audits.

Mr. Dodd said he believed in the development of vocational education in public and private corporations. He said that every course of study should show two things. That the person taking the course has profited and that he can produce more.

The following topics were discussed:

What shall be the attitude of the employer in regard to encouraging the employe in getting after-education?

Problem of training teachers.

Problem of establishing standards.

Mr. Dodd said that the National Society has made a study of the requirements of vocational teachers, and had come to the conclusion that these teachers must have certain training. He said the National Society has a Bulletin on this matter.

It was the consensus of opinion of those present at the meeting that an effort should be made to find out where public school activities shall cease and corporate activities shall commence.

OUR FOURTH ANNUAL CONVENTION

A Strong Committee Will Handle the Convention Which Insures Its Success

President McLeod advises that the following General Committee has been appointed to arrange for and conduct the Fourth Annual Convention of Our Association which will convene in Pittsburgh, May 30, 31st, June 1st and 2d.

MR. JOHN McLEOD, *Chairman*,

President—The National Association of Corporation Schools.

DR. A. A. HAMMERSCHLAG,

Director—Carnegie Institute of Technology.

DR. SAMUEL B. McCORMICK,

Chancellor—University of Pittsburgh.

DR. WM. M. DAVIDSON,

Superintendent—Pittsburgh Public Schools.

MR. TAYLOR ALLDERDICE,

Vice-President—National Tube Company.

MR. C. B. CONNELLEY,

Dean—School of Applied Industries, Carnegie Institute of Technology.

MR. C. B. ROBERTSON,

Director—University Extension, University of Pittsburgh.

MR. C. R. DOOLEY,

Manager—Educational Department, Westinghouse Electric & Manufacturing Company.

MR. J. E. BANKS,

Engineer—Bureau of Standards, American Bridge Company.

MR. FRANK J. LANAHAN,

Representative—Pittsburgh Chamber of Commerce.

MR. J. F. BAILEY,

Secretary to Superintendent, Pittsburgh Public Schools.

MR. E. M. PEAKE,

Safety Committee—Carnegie Steel Company.

Committee Chairman

Educational Exhibit—Mr. C. B. Connelley.

Hotel Committee—Mr. E. M. Peake.

Publicity Committee—Mr. John McLeod, Mr. Frank Lanahan.

Reception Committee—Mr. Taylor Allderdice.

Entertainment Committee—Mr. Frank J. Lanahan.

Banquet Committee—Mr. Taylor Allderdice, Mr. C. R. Dooley, Mr. Frank J. Lanahan, Dr. Wm. M. Davidson.

Committee on Meetings—Mr. C. B. Connelley, Mr. C. B. Robertson, Mr. J. F. Bailey.

The program is not yet completed but the general plan as decided by the Executive Committee will not be materially different from that followed at the convention in Worcester last year.

There will be eleven sub-committees to report, and printed copies of their reports will be in the hands of all our members in time for a careful study of same before the forthcoming Convention convenes. Presentation of these reports and discussion will constitute the principal features of the program.

Speakers of recognized ability and prominence will make addresses at the banquet. President McLeod and Mr. C. R. Dooley, of the Executive Committee, are directing the activities of the Local Committee, which insures a successful Convention.

Our Association also has several other Class "A" members in Pittsburgh who are co-operating.

Present indications are that the forthcoming Convention will be the largest in point of attendance, and, as our Association has gained both in experience and knowledge there is every reason to believe that those who attend the Convention will experience the same feeling of satisfaction as has characterized the past Conventions which our Association has held.

Copies of the preliminary programs will be forwarded to all our members as soon as the arrangements have been completed.

BULLETINS OF THE UNITED STATES BUREAU OF EDUCATION

Recent Bulletins issued by the United States Bureau of Education:

"Monthly Record of Current Educational Publications," compiled by the library division of the Bureau of Education, under the direction of John D. Wolcott, Chief of Division.

Copies of this Bulletin may be procured from the Superintendent of Documents, Government Printing Office, Washington, D. C., at five cents per copy.

BUILDING MEN FOR A THOUSAND STORES

The United Cigar Stores Company Trains Carefully and Constantly to Insure Good Service

By H. G. PETERMANN,

Director of the United Training School

There was one critical period in our early operations. Business had come so fast, we had concentrated so hard on the commercial end, that the most vital thing of all—*service*—had been allowed to drift. New clerks, whom we had been hiring by the score, had not caught the true spirit of the enterprise. They did not realize that the very foundation of a retail business is SERVICE, that high values, attractive fixtures, good locations, all go for naught, unless backed by unfailing courtesy and cheerful willingness behind the counter.

We keep driving this home to our people: "Look after the consumer first, last and all the time. Do this faithfully, make HIS interest your FIRST interest, and the Company's interest will take care of itself."

Some of our people have found it hard to absorb this simple principle. Here is an example:

A clerk after showing five boxes of cigars to a customer, who was particular as to color, had finally said:

"We can't open every box in the house!" The customer had gone away angry. The clerk was called to headquarters.

"The man only wanted a five-cent cigar," he pleaded, "and I thought I'd spent enough time on him."

"If he had only wanted a two-cent cigar," our Sales Manager answered, "it was his right to look at every box in the house."

This clerk had failed to protect the customer's interest.

Incidents like this came to the surface so fast we realized we would have to build salesmen for our stores.

Build men who will carry out our rules relative to the handling of the customer; for on his continuing good will depends our existence.

Build men to maintain the policies, methods and personnel of the Company.

Build men who can talk intelligently and interestingly about our proposition and goods.

Build manly, honest, stick-to-the-job, fight-to-the-finish fellows who will throw themselves into our game heart and brains.

We have in our organization thousands of men who can *build trade*, but they can't *build men*. Trade builders are important in business, but the men who count most are the *man-builders*, the chaps who build the men under them for the place just ahead.

"Always build men" the Company's representatives are told. "If the man immediately under you is not just right, tear him down and build him over—don't throw him away. Every man is a specialist in something. Find your man's specialty. Develop it. It may not be of high order, but if it's a specialty it's valuable to this Company."

While we found it, comparatively speaking, easy to build men when we had fifty stores, we found it an entirely different proposition to do the same thing in three hundred. So we set up a Salesmen's Training School in 1905 and have maintained it ever since. The first requisite in our Training School is a sound body. We have a perfectly equipped Medical Department. Unless the Medical Director passes favorably upon an applicant for a position, he is not accepted.

Every sound man is worth building up in business, but a physically weak man, or a man with an organic disease is not. We must have something to build on. A man who is ill or weak cannot be pleasant, and a good salesman must not only be pleasant, but he must look pleasant and say pleasant things. People do not want to buy goods from clerks who look ill or cross. Hence, we do not take chances in hiring sick men.

Next to brains one of the chief assets of a salesman is his feet, since he has to stand all day. We have a chiropodist who examines and treats our clerks' feet. If a man has bad feet, we do not employ him. The net result of the physical examination and medical service is that since it was established, we need only one-fourth as many extra clerks as before.

With a small beginning in 1905, the Training School has been developed yearly. So profitable has this method of building men proven to the worker, as well as to the Company, that in addition to a well-equipped schoolroom we have added a "School Store," so that the new employe may get practical counter experience, dealing directly with actual customers and handling money and goods. There the Instructor makes the sales demonstrations which cannot be made realistic in the classroom. We find that many men who give a perfect demonstration in the

classroom, when confronted with real customers are inefficient or total failures.

In training men the theoretical is given in homeopathic doses. However, the fundamental things taught in the schoolroom, coupled with the experience and practical training in the "School Store," will give the new employe a working knowledge of what is expected of him; provided, of course, that he is endowed with a good foundation of common sense.

All new salesmen are required to attend the Training School course, which covers a period of from fifteen to twenty days. Our method of buying and selling, also our rules relative to the handling of customers, are made plain to them. The history of tobacco from the time the seed is planted in the ground until the internal revenue stamp is pasted on the box that contains the finished product is explained. We get right down to the how and why of our game, so that even a child may be able to understand it.

The salesman's education is especially directed to make him useful to the customer, to help the smoker to save money, as well as to get the greatest value and satisfaction out of his purchase. What this means to the consumer was illustrated recently when one of our customers was complaining that the high cost of living had so affected his revenues that he would have to cut down his outlay for smoking. He was a heavy smoker and always used twenty-five-cent imported cigars.

"Why not try our Flor de Murias?" suggested the salesman, and he told the customer that they were exact duplicates in shape and quality of the most popular brands of imported cigars. These Flor de Murias cigars are made in the Tampa branch of the Flor de Murias Havana factory. This is done to save the consumer the import duty. For instance, the Perfectos imported from Havana cost the smoker twenty-five cents. Approximately seven cents of this twenty-five cents is duty, which adds nothing to the value of the cigar. In the Flor de Murias brand the Perfecto sells at three for fifty cents, which is the actual value of the cigar itself.

The customer made the trial, saving the import duty of seven cents on each cigar, and was completely satisfied. Later he expressed his astonishment that the salesman knew so much about cigar values.

"Do you smoke them yourself?" he asked.

"No," replied the salesman, "I couldn't afford to, but we're taught these things in the Company's Training School."

A sample day's schedule in the School is as follows: 8.30 to 9.00 A. M. Opening talk (every morning), "Service First."

Business is founded on service.

Good business on good service.

The best business on the best service.

9.00 to 10.00 A. M.—Discussion and test questions on previous day's work.

Writing a Sales' Talk.

10.00 to 11.00 A. M.—Culture and manufacture of cigar tobacco.

11.00 to 12.00—Sales demonstration.

Handling the customer, goods and money.

This session is in School Store.

12.00 M. to 1.00 P. M.—Luncheon hour.

1.00 to 2.20 P. M.—Memorizing sizes and prices of cigars. Irregular handling of money.

Violations of office instructions.

2.30 to 3.30 P. M.—Test questions and selling talk papers returned to students corrected.

General discussion.

3.30 to 4.00 P. M.—Booklet: "What to Say, How to Say It, When to Say It."

4.00 to 6.00 P. M.—School store—handling the customer, goods and money.

While in school the men are on probation. Those who show a lack of interest in our proposition, or in other respects, after a fair try-out, do not measure up to the required standard, are weeded out.

Next following the instructions in the Training School is to place the salesman in the store where we can use him to our and his best advantage, so that he will have every possible chance to "make good." All men are not fitted to all of our stores. United Stores being located in all sections of cities, and the patrons of these stores of many classes and conditions, we must select the men to fit these varying conditions. Of course, mistakes in placing men will occur. Occasionally a man will get in the "wrong pew," but the Sales Managers are supposed to be quick to note and correct such errors.

The Company's interest in every phase of man-building never

slackens, because what we need most in our business is men who can help us reach our high ideals.

MAINE CENTRAL INSTITUTE PROGRESSIVE

A new course, Vocational Direction, has just been opened at Maine Central Institute. This is an elective course and has already proved popular among the student body. More than fifty students are expected to enter each of the courses.

An important feature of these courses is the plan of having men and women representing the various vocations lecture to the classes. In this way students may gain first hand information regarding the professions in which they are especially interested, and may learn some interesting facts about professions whose opportunities are unknown to them. This will give them a better idea of the vocation to select. Everything from the thrills that make up the life of the engineer, forester and doctor and the long and logical training necessary to become a successful lawyer to the profitable and unprofitable sides of these and other professions will be carefully presented to the students in those courses.

The girls start their course with a series of lectures on household management, in which all details of the management of a house will be taken up. An important part of this course will be the training in the keeping of household accounts; in the division of the income; the decorating and furnishing of the home and the best and most modern methods in keeping house.

NEW MEMBERS

Since the last membership statement appeared in the BULLETIN, the following new members have been received:

Class "A"

Chalmers Motor Company, Detroit, Mich.—Mr. W. P. Bradley.
Kellogg, Andrew H., Company, 141 E. 25th Street, New York,
N. Y.—Mr. James S. Hedges.

Class "C"

Mr. D. C. Buell, Director, Railway Educational Bureau, Omaha,
Neb.
Mr. Andrew Deer, Editor *Service Idea Magazine*, Sydney, Australia.
Mr. N. A. Hawkins—Ford Motor Company, Detroit, Mich.

EDUCATIONAL WORK OF THE ATCHISON, TOPEKA & SANTA FE RAILWAY CO

How This Great Progressive Railway System Trains Its Apprentice Employees

BY F. W. THOMAS,

Supervisor of Apprentices, Motive Power Department

OUR OBJECT is not to make mechanical engineers, but to make first-class skilled mechanics, to recruit our shop forces with men—trained, educated, "Santa Fe way."

Training Apprentices

The difficulties encountered on the Santa Fe in obtaining labor qualified with the skill and intelligence to make efficient workmen under modern conditions have not been local or peculiar, although, perhaps, the method of meeting and overcoming these difficulties has been more thoroughly, scientifically, practically and successfully carried out than has been heretofore attempted. The trouble is due entirely to the American industrial system which aims to realize the quickest and largest turn-over, and return of profit, on the investment in each line of manufacture. It does this by the production at minimum cost of a maximum consumable quantity of standard products. This industrial policy, while productive of enormous financial gains, has had the effect of generally reducing American workingmen to the plane of mere operatives of machinery. The result has been, through the discouragement on the one hand, of the demand for and purchase of high-priced hand-made and well-made special products, a falling-off on the other hand, in the pursuit of the particular trades and handicrafts calling for the ability, care and skill to make such products. The industrial and commercial situation caused by the working out of this tendency is an unpropitious and unpromising one at the present day, and nowhere is its effect more keenly manifest than in the quality of work done by railroad employes, whether in transportation service, or in the maintenance of way, or of equipment.

What we need today, for the more efficient and hence economical operation and maintenance of our railways, is trained, skilled, and careful men. To obtain these men we shall have to follow a course counteracting the effect of the methods of the immediate past. The trade unions have set up as an ideal an

average performance at an average pay, and a discouragement of a better performance at a higher rate of pay for individual excellence; and the training and growth of skilled mechanics has been checked or aborted. It is to a process of man-making that our railroads must address themselves if they are to expect a higher efficiency of performance on the part of their employes.

With the particular object of furnishing material for a later generation of mechanics in its various shops, the Santa Fe management decided, in August, 1907, to establish a thorough apprenticeship system with a view to training these new men not only to competency and skill in mechanical arts, but also to loyalty to the railroad, to interest in its business, and to familiarity with its standards and methods. By September 1st this resolve had taken the form of the appointment of a Supervisor of Apprentices, whose especial and exclusive duty lay in overseeing this work and organizing the staff, general and local, and planning for the prosecution of this work at all the principal shops.

The Santa Fe apprentice system is composed of two co-ordinate branches, one known as school instruction, and the other as shop instruction. The men engaged at the smaller points having from twelve to fifteen apprentices, and who have charge of both school and shop work, are known as joint instructors. At the still smaller points, having from five to eight apprentices, there is a traveling instructor who visits two or more places each week, spending two days at each point.

School Instruction

At each mechanical point on the system there is a room in the midst of the shop buildings, but sufficiently removed to be free of objectional noises of the shop, which is known as the apprentice school room. As its name suggests, this room is equipped with the necessary furniture, such as desks, tables, chairs, cabinets, models, drawing instruments, etc., all being provided free by the company for the use of the apprentices. The man in charge of this room is known as the apprentice school instructor. He must be a man both theoretically and practically educated. In fact practically all the school instructors are men who have been graduated from some technical college or university and who served an apprenticeship on this road and are, therefore, familiar with the theoretical and practical operation of each device or part of locomotive, car, or shop tool.

The subject taught in the school room are mechanical and free-hand drawing, sketching, shop arithmetic, the simpler elements of mechanics and business letter writing. A little treatise on the various trades and the material used in each trade is also provided for the information of the apprentices. No regular text books are used, but lesson sheets with practical problems, such as they daily come in contact with in their trade, are given them. Each lesson refers to some part of the shop tools, locomotive or car, the object being to keep the boy's mind fixed on the trade he is indentured to learn and not allow his mind to wander in foreign fields. As stated, these lesson sheets are simple and practical and are kept up to date, for, the department having a printer and press of its own, these lesson sheets may be changed at any time.

The apprentices are required to attend the apprentice school two hours a day two days a week during daylight or working hours. It is needless to say that it does not require very much "making," as the apprentices are always more than anxious for the hours to arrive at which they can go into the school room. Each apprentice has his own drawing board, a full set of first-class drawing instruments, scales, triangles, etc., and a regular place is provided in lockers for these, all of which is furnished free by the company and the boy is paid while attending school. The school hours are generally from 7.00 A. M. to 9.00 A. M., when the boy is fresh from his night's rest. Better results are obtained at this time than at any other part of the day.

While night school may have been profitable years ago, it was before this nervous, distracting age. A boy working in a modern railroad shop for ten hours is practically unfit for night work or study. There is so much to attract him these days that we believe the evening hours should be left to him for his own amusement and recreation. While the brightest and most energetic and ambitious boy would probably make the best of a night school, we do not always have these boys. It is the average boy with whom we must deal, and we must make our requirements suit his condition. Eight years of day schooling with two or three years of night work in our apprentice work has proven the truthfulness of the above assertion.

Shop Instruction

In the shops where the real practical work must be learned it has been found that in any modern shop where the officers of

the shop are vitally concerned in the output of the shop, the foremen and gang foremen have very little, if any, time to devote to the apprentices. So for every twenty-five boys or less, and for each department, we have employed a man known as the shop instructor, whose sole duties are to teach and instruct the apprentice while learning his trade. He is not responsible for the output of the shop or the output of any machine, but he is there solely for the purpose of seeing that the apprentice learns quickly and is taught the most improved and modern method for each operation. He takes the boy in hand, starts him out on some simple machine, first showing him the different parts of the machine, how it is controlled or operated, how to avoid certain things in order that his fingers, arms, or body may not be endangered, also to be on the lookout at all times for the safety of his fellow workmen. He moves the boy from machine to machine, from one class of work to another (from machine to floor, from floor to bench, etc.), just as soon as he masters each step. There is no set program for moving or changing the boys around. Where one boy can master a lathe in 60 days, another can accomplish it in 30 days. It may require one boy 90 days to master the milling machine, while another will require six months. It is left entirely with the shop instructor to say when the boy shall be transferred from one class of work to another, but the shop instructor is held solely responsible for the thorough instruction of the boy, and each boy must be given every class of work in his particular trade during the four years' apprenticeship.

Each boy is provided with a first-class set of tools used in his particular trade. These tools are purchased at wholesale price and sold to the apprentice on small monthly payments, each apprentice thereby being provided with a uniform set of tools of first-class quality, these being replaced free of charge should any defect develop in them. For the safe-keeping of their tools the company furnishes free a box in which to keep the tools, these boxes being made by the apprentices of the cabinet shop.

Special Apprentices

A limited number of special apprentices are employed, one being located at each of the division points of the system. These young men must be full graduates in mechanical engineering of technical colleges or engineering universities of recognized standing. Since they have received sufficient theoretical or technical

knowledge while in college, it has been found best to confine their three-year apprentice course to actual shop work, a thorough grounding in practical work being necessary to train them for applying the technical knowledge gained in college.

Special Course

A special course of one year in length is open to certain of the brighter apprentices, both special and regular machinist apprentices. This course consists of two months in the boiler shop, four months in the roundhouse, two months in the freight car shop, two months inspecting incoming and outgoing engines, and two months with the road foreman of engines. Great care is taken in the selection of the young men assigned to this course, the object being to develop them for executive positions. No one is allowed to enter upon the course until after he has received a thorough training on all varieties of machine shop and erecting work.

Selection of Apprentices

Apprentices are selected from boys living in towns and communities adjacent to the railroad, and, excepting freight car apprentices, must be between the ages of 16 and 22, except in some states in which there are laws requiring boys to be 18 before entering a railroad shop. Very seldom is a boy over 21 employed, except for a freight car apprenticeship, for which the age limits are 19 and 30. It has been found that the best results can be obtained from boys 16 or 17 years of age. They are much more easily handled, more easily taught and can more easily adapt themselves to the rules and regulations of their surroundings. The boys should have a common school education, preferably have finished the grammar school. Occasionally boys who have had meager opportunities, who are bright, industrious and energetic, are employed regardless of their education. Of the applicant who has had unlimited opportunities much is required, but where he has had few opportunities a very charitable view is taken. He is required to pass a medical examination and be free from any organic trouble or chronic ailment. He is examined by the school and shop instructors, who endeavor to ascertain the qualification of the boy.

But little note is taken of the boy's parentage, so long as the boy himself is strong and industrious. It has been found that character letters are about the most useless things that can be

written. The boy is asked a great many questions about himself—his opportunities, length of time he attended public school, why he left public school, what work, if any, he was engaged in before applying for apprenticeship, the occupation of his parents, the number in the family, where he spends his evenings, what recreation he engages in, his playmates or companions, and often about his best girl. Endeavor is made to find out from him as much as possible about himself. This information will often govern methods of handling him in the future.

Individual Instruction

Much of the success of the apprentice system is attributed to the fact that all instruction is individual. While the boys go to school at certain hours in classes, there may not be two boys in the whole class who are studying the same question or using the same lesson sheets, as each boy is treated as a unit. The information gathered from the little examination upon entrance, personal characteristics, his education and industry, are all considered and carefully weighed, and the boy's instruction is governed by these conditions. A bright, smart, energetic boy passes along as rapidly as he learns the subjects, and is not held back on account of the slower and duller boy. The slower and plodding boy moves along only as he masters his subjects. Each must thoroughly know the subject, branches or class of work before he will be moved to another.

Probationary Period

The first six months of his apprenticeship is known as a probationary period. He is given every opportunity to develop any talent he may possess, and he must show during that six months' period that he has the qualifications for the trade he is indentured to learn. Every thirty days after entering upon his apprenticeship the general foreman of the shop, department foreman, gang foreman, shop instructors and school instructor receive a notice that the boy has served one or more months of his apprenticeship, and are asked to pay strict attention to him in order that they may, at the end of six months, be able to pass on his fitness to continue his trade. It is a great deal better that the boy should be dismissed earlier in his apprenticeship rather than be allowed to drag along through the four years' course when he is unfitted for the trade he is endeavoring to learn.

Apprentice Board

In each shop there is what is known as the "apprentice board," a committee composed of the general foreman, department foreman, gang foreman, pit foreman, shop and school instructors. The duty of this board is to pass on all questions in reference to the apprentices. They pass on a boy's fitness at the expiration of his probationary period, pass on applications for transfer from one shop to another, or from one trade to another. They recommend what discipline, if any, is to be administered to the boy for any infraction of the rules and regulations. This board is a live, active body, anxious to deal out real justice to the apprentice. Each has the same authority and each shows the same spirit or willingness to give the boy the best chance or opportunity possible. The personal prejudice of one man or one member of the board cuts very little figure, but they are anxious that each boy, however poor and friendless, may be given full justice. Any apprentice in the shop has a perfect right to apply to the board at any time, when he deems any official has treated him unfairly.

Discipline

A modified form of the Brown system of discipline is used for the punishment of apprentices. They are no longer suspended and sent home for any infraction of the rules and regulations, but are penalized on their agreement. If a boy is late at work, spoils a piece of work through carelessness, or lays off without permission, instead of being sent home, as is usually done in most shops, he is simply penalized on his agreement the number of days he would have been sent home. This, of course, lengthens out his apprenticeship all the way from five to fifty hours for each offense. But if the boy, after being penalized, pulls himself together and attends strictly to business and goes six months without any further discipline, the penalty is removed and he is given a clean slate. This has been found to be the most fruitful and beneficial method of disciplining apprentices. The apprentice agreement, or contract, made with the boy when he is employed as an apprentice, stipulates that the company will give him an opportunity to learn his trade, and the regulations stipulate he shall work ten hours a day regardless of the number of hours worked by other shop employes, with the exception that they may work the apprentices one-half day Saturday. Of course, if the shops should close for the entire day the appren-

tices will not work, nor will they be paid. While other employes in the shops may be put on short time, the apprentices are required to work the regular ten hours each day.

The general treatment of the apprentice boys on the Santa Fe is a wholesome one and is a mixture of parental and military treatment. It is desired that they have the very best time possible while serving their apprenticeship. No one is allowed to abuse or mistreat a boy and no one is allowed to curse or swear at a boy. He is not used as a matter of convenience nor in any sense as a helper in the shop. He is taught from the very beginning that the trade that he is indentured to learn is the very best possible occupation for him; that he could not have selected any other work for which he is better suited. In other words, it is endeavored to make him happy and contented in his work. The influence of these apprentice schools in the treatment of the boys has shown in the general deportment and action of the other employes in the shop. It is a common saying on the Santa Fe that wherever a Fred Harvey House is built it improves the whole moral tone of the town, and it can be truthfully said that wherever an apprentice school has been established on the Santa Fe Railway it has improved the whole moral tone of the shops.

Athletics

The company provides an athletic field, and the boys are encouraged to engage in the various contests. Baseball, football, basketball, etc., are played in their regular season. Contests with apprentice teams from other points are regular features. The apprentices at three of the larger places have regular brass bands, from 25 to 40 pieces each, also orchestra and glee clubs.

Graduates

Upon graduating or completing his apprenticeship the apprentice is given a handsome diploma showing that he has served an apprenticeship in the shops of this company and that he has become a competent and skilled mechanic, this diploma being signed by the master mechanic, mechanical superintendent, supervisor of apprentices and the assistant vice-president, who is the chief mechanical officer of the system. In addition to this, he is given a draft for \$75.00, as a reward for faithful and diligent application during his four-year apprenticeship, and on his remaining in service for six months as a journeyman, he is given another draft for the same amount.

Records

A full and complete record is kept of the apprentice during his four-year apprenticeship. The Supervisor of Apprentices knows each month the number of drawings he has made in the school room, the number of problems he has solved, other lessons he has learned, and what work he has done in the shops. He may do a dozen different jobs during the month, but each is recorded, also the number of hours he is absent from work for all causes, and four times during his apprenticeship the shop and school instructors are required to fill out a blank, showing his personal characteristics, this blank having 28 subjects on which the instructors must grade him as being "very good," "good," "medium" or "poor." They also advise the Supervisor of Apprentices at the completion of his apprenticeship if the young man has shown any qualification for leadership; in other words, whether he is material for the making of a foreman. Such names as have the qualification for leadership are sent to the mechanical officers, and when any need a foreman these young men are given the preference. The apprentice, after graduating, is not forgotten or turned loose. A watchful eye is kept on him and he is assisted and directed when in need of help. A record is kept if he is transferred to another shop on the system, and even if he leaves the service the record is maintained. It is known where they all are today, what they are doing, even the wages they are receiving. Seventy-five per cent. of all the apprentices or graduates who have left the service have, within six months, applied for reinstatement.

Organization

The Supervisor of Apprentices has charge of all matters relating to the apprentices; he reporting to the Assistant Vice-President in charge of mechanical operation. He has a central office wherein all lesson sheets, problems, etc., are made and sent out. A complete record of each apprentice is kept in his office and all indentures for apprenticeship are approved by him. A set of rules and regulations governing the apprentices is published by the Supervisor of Apprentices and approved by the Assistant Vice-President, these rules being applicable to all apprentices. In addition to this, all of the large points have one or more school instructors, who are appointed by the Supervisor of Apprentices. There is also an apprentice shop instructor for every 25 boys, these being selected by the local shop authorities

with the approval of the Supervisor of Apprentices. The senior shop officials are the employing officers, employing all the apprentices in the shops, but each applicant must be examined by the shop and school instructors.

Results

The apprenticeship system on the Santa Fe has proven its efficiency from the very beginning, due primarily to the fact that it has the earnest personal and official backing of all the officers of the company from the President down. In a short while the schools became the pride of the local shop officials, and visitors are shown the apprentice school by the master mechanic with a great deal of pride and pleasure.

The present apprentice system has become a fixture on the Santa Fe, and is considered as much a fixture in the shop as the power house or tool room. If the shop instructor is absent for any cause for more than a day a "howl" is heard from the shop foreman as to when the instructor is coming back. There has never been the least friction as to conflicting authority between the foreman and instructor. They have always worked most harmoniously, the one helping the other. In the absence of the foreman for a day or more the instructor generally runs the shop. In the absence of the instructor the foreman does all in his power to assist and instruct the apprentices.

The apprentice system on the Santa Fe has never been considered a matter of convenience but has always been treated as a recruiting system for filling the shops with men of Santa Fe making and training. While the system has been more than sustaining from the very beginning, this fact alone was never considered.

During the eight years that the present system has been in operation there have been graduated 773 mechanics; of these, 556, or 72 per cent., are still in service. Of all the boys graduated during the last fiscal year, 95 per cent. are in the service. About 16 per cent. of the graduates have been given some official position.

All have been trained and educated "Santa Fe way."

The business men of Minneapolis have selected representatives to confer with the instructors in the public schools of that city in an effort to agree on some constructive educational policy to meet the demands of the business world.

TRAIN SENSES IN HIGHER SCHOOLS

Observational Faculties of College Men Undeveloped, Says Dr. Eliot

Radical changes in American secondary schools, which he says are "glaringly deficient" in their educational programs, are recommended by Charles W. Eliot, president emeritus of Harvard University, in a paper published by the general education board of the Rockefeller Foundation.

Doctor Eliot recommends thorough "training of the senses." He laments the "inability to see, hear and describe correctly" of the American people, uneducated and educated alike. He says that it is "worse than absurd to turn city children into the streets more than two months each summer," and favors shortening the summer vacation and lengthening the school day. He believes that "progressive sense-training from beginning to end of systematic education" would solve justly the problems in the "American tax-supported system of public education, which have been in debate for generations."

"The changes," he writes, "which ought to be made immediately in the programs of American secondary schools, in order to correct the glaring deficiencies of the present programs, are chiefly: The introduction of more hand, ear and eye work, such as drawing, carpentry, turning, music, sewing and cooking, and the giving of much more time to the sciences of observation—chemistry, physics, biology and geography—not political but geological and ethnographical geography."

Professional Educators Blind to Education's Needs

Doctor Eliot believes that educational processes have been adequately developed only in medicine, and that, while life has been revolutionized through physical, chemical and biological science, "professional educators have been, and still are, blind to the necessity of a corresponding reformation or revision of the processes of education."

"The reason," he says, "for the comparatively early improvement of medical education is that the medical art has always depended for such measure of success as it attained on the physician's power of accurate observation, and his faculty of reasoning cautiously and soundly on the testimony which his senses gave him."

"The training the medical student now receives is largely individual training in the use of his senses; and this training is given by experts in the use of their eyes, ears and hands in diagnosis and treatment. The just reasoning follows on the trustworthy observation. What has already been done in medical education needs to be done in all other forms of education, whether for trades or for professions, whether for occupations chiefly manual or for those chiefly mental."

College Students Lack Skill

Doctor Eliot deploras that "As a rule, the young men admitted to American colleges can neither draw nor sing; and they possess no other skill of eye, ear or hand. A high degree of skill in athletic sports is acquired only by exceptional persons, and the skill itself is of a coarser kind than that needed by the artist and the skilled workman."

Again: "Many highly educated American ministers, lawyers and teachers have never received any scientific training, have never used any instrument of precision, possess no manual skill whatever, and cannot draw, sing or play on a musical instrument. Their entire education has dwelt in the region of language, literature, philosophy and history, with limited excursions into the field of mathematics." Their "senses were never trained to act with precision"; and their "habits of thought permit vagueness, obscurity and inaccuracy."

"Such a deplorable result," Doctor Eliot declares, "ought not to have been possible; but it has been unavoidable by the individual, whether child or parent, because the programs of secondary schools still cling almost exclusively to the memory subjects and the elements of mathematics, and college students are apt to adhere in college to the mental habits they acquired at school."

"If any one should ask why has modern society got on as well as it has, if the great majority of its members have had an inadequate training in the use of their senses or no systematic training of that sort, the answer is that some voluntary agencies and some influences which take strong effect on sections of the community have been at work to mitigate the evil. Such are, for example, athletic sports, travel, the use by city people of public parks and gardens, the practice of that alert watchfulness which the risks of crowded thoroughfares and of dangerous industries compel, and the training of the senses which any man who practices well a manual trade obtains on the way. Many of

the household arts also give a good training in the careful seeing and handling which lead to accurate perception.

"The problem is now how to make systematic secondary education support and better these incidental influences and how to co-ordinate sense training with accurate reasoning and retentive memorizing."

Concrete Instruction Advocated

Doctor Eliot believes that the science he recommends as part of the school programs should be taught "in the most concrete manner possible"—that is, in laboratories with ample experimenting done by the individual pupil with his own eyes and hands, and in the field through the pupil's own observation, guided by expert leaders.

"In city schools a manual training should be given which would prepare a boy for any one of many different trades, not by familiarizing him with the details of actual work in any trade, but by giving him an all-round bodily vigor, a nervous system capable of multiform co-ordinated efforts, a liking for doing his best in competition with mates, and a widely applicable skill of eye and hand." Music and drawing are given "substantial places" in Doctor Eliot's educational scheme.

He holds the Puritan attitude toward the fine art studies responsible for so many native Americans "who have grown up without musical faculty and without any power to draw or sketch, and so without the high capacity for enjoyment and for giving joy which even a moderate acquaintance with these arts imparts." And he calls this "a disaster which has diminished the happiness of the native American stock," adding: "It is high time that the American school—urban or rural, mechanical, commercial or classical, public, private or endowed—set earnestly to work to repair this great loss and damage." He declares that those who "regard the sense-training subjects as fads and superfluities" hold a "dangerously conservative doctrine."

Doctor Eliot devotes much of his paper to a consideration of how his "sense-training program" should become part of the school system. He believes that the number of periods given to memory subjects of mathematics should be reduced, vacations shortened, and, without any risk to the health of the students, that every school plant, whether in the city or country, should be used by regular pupils from 8 or 8.30 A. M. to 4 or 4.30 P. M. At night or at hours outside the working time of the industries of

the community the building should be opened to older youths and adults. He believes in a large extension of the public school system by making continuation and evening schools universal.

Easier Studying and Teaching

"The suggested changes in American school programs," he says, "will not make life harder or more fatiguing for the pupils. On the contrary, observational study and concrete teaching are more interesting to both children and adults than memory study of any sort; and whenever the interest of pupils is aroused it brings out more concentrated attention and harder work, but causes less fatigue."

The cost of the new system, he says, would be large, chiefly in the salary list, because more teachers would be required and most of them would be men, and the programs of normal schools would need considerable modification and development. The imperfect manner in which certain scientific subjects are now taught, he believes, is responsible for whatever disappointment there may be with them.

BOSTON PUPILS SHOULD HAVE TRADE COURSE

Recommending a large increase in the number of Boston school children to receive training along lines which will more properly fit them for work in the manufacturing and mechanical industries, the Finance Commission issues Chapter 6 of its report on the Boston school system.

The Commission declares that there is an excess in the number of boys and girls taking vocational work leading to a professional life, and that there is an indication that many of them will not find need or opening for their services.

The conclusion is drawn that it is the problem of the schools to provide the training which will enable pupils to prepare for such vocational activities as are open to them.

The report declares that the demand will be great for iron and steel workers, salesmen, bookkeepers, accountants, etc., wholesale and retail dealers, carpenters and woodworkers, servants, tailors, textile workers, painters, railroad and express officials, masons and builders. The Commission also figures the demand for policemen, detectives, barbers, etc.

Taking figures for one year the Commission draws these conclusions: In agriculture five were needed, none was prepared,

and thus the deficiency was five. In manufacturing and mechanical industries 1,611 were needed, 539 were prepared, the deficiency being 1,072. In trade and commerce 1,401 were needed, 826 were prepared, and the deficiency was 575. For domestic and personal services 386 were needed, none was prepared. In professional life 228 were needed, 802 were prepared, and the excess was 574.

For women the compilations show a deficiency in the manufacturing and mechanical industries, in trade and commerce, and in domestic and personal service. In professional life a considerable excess is apparent.

"Probably the most important point," says the report in one place, "is that many pupils leave the elementary schools without any vocational training. This indicates that there should be an increase in pre-vocational training. There is an undoubted deficiency in the number adequately prepared for domestic and personal service. The importance of proper preparation in this branch is as great for the home as it is for many paid services."

STAMPING OUT ILLITERACY

(The Survey)

Kentucky has, in its moonlight schools, made a most romantic and effective attack upon illiteracy; but Kentucky is not alone. North Carolina faced its illiteracy percentage of 12.3, and planned night schools for its male voters. And now in Maryland, a pamphlet entitled "What Shall the Women Do About Compulsory School Attendance?" is being circulated by the State Federation of Women's Clubs.

Especially promising is the frankness with which the race problem is discussed. There are three times as many white children, whose names are on the registers, out of school as there are colored children. Without any compulsory school attendance the negroes in Maryland have reduced the illiteracy of the members of their own race of ten years of age and over from 50.1 per cent. in 1890, to 35.1 per cent. in 1900 and to 23.4 per cent. in 1910.

At this rate of decrease, illiteracy among the Maryland negroes ten years old and over will have disappeared in 1930; whereas "it will be 1950 before all the native white voters of Maryland will be able to read and write."

WOULD TEACH CHILD LIFE AND NOT LATIN

Dr. Abraham Flexner, of General Education Board, Advocates A New System for the Public Schools

A "modern school" in which the process of education would be based on the objects and processes which the child saw about him, to the substantial exclusion of theoretical and traditional studies, has been outlined in a paper by Dr. Abraham Flexner, assistant secretary of the General Education Board, and the board has invited expressions of opinion on the desirability and feasibility of such a school, together with criticisms and suggestions. The board explained that while it did not indorse or promulgate any educational theory, it was interested in facilitating the trial of promising educational experiments under proper conditions.

Formal grammar, ancient languages, theoretical studies in modern languages, and the bulk of history and of pure mathematics were the subjects which Dr. Flexner would remove from the curriculum as useless and cumbersome.

"The curriculum would include nothing," he said, "for which an affirmative case cannot now be made out. . . . Not only do American children as a class fail to gain either knowledge or power through the traditional curriculum—they spend an inordinately long time in failing. An economy of two or three years is urgently necessary."

These studies would be dismissed because, Dr. Flexner said, "their present place in the curriculum rests on tradition and assumption, not because the Greek and Latin literatures, for instance, are less wonderful than they are reputed to be. It is useless to inquire whether a knowledge of Latin and mathematics is valuable, because pupils do not get it; and it is equally beside the mark to ask whether the effort to obtain this knowledge is valuable discipline, since failure is so widespread that the only habits acquired through failing to learn Latin or algebra are habits of slipshod work, of guessing, and of mechanical application of formulæ, not themselves understood."

The Realities of Life

With these cumbersome studies removed the curriculum would have as its central and dominating feature scientific study, Dr. Flexner said, adding: "Aside from reading, writing, spelling and figuring the curriculum would be built out of actual activities

in science, industry, æsthetics, civics." And these studies would be forwarded with the use of "the accessible world" as a laboratory to train children "with an eye to the realities of life and existence."

The features of this accessible world which a school in New York, for instance, would employ to show its pupils what is really in the world about them were enumerated—the harbor, the Metropolitan Museum, the Public Library, the National History Museum, the Zoological Gardens, the city government, the Weather Bureau, the transportation systems, lectures, concerts, plays.

"Other communities may have less," says Dr. Flexner, "but all have much. As things now are, children living in this rich and tingling environment get for the most part precisely the same education that they would be getting in, let us say, Oshkosh or Keokuk."

The child's interests would be utilized, as is proposed in most modern theories of education, to guide him gradually to a knowledge of the laws and natural history underlying the phenomena.

"The children would begin," Dr. Flexner said, "by getting acquainted with objects—they would learn to know trees, plants, animals, hills, streams, rocks. At the next stage they would follow the life cycles of plants and animals and study the processes to be observed in inanimate things. They would also begin experimentation. In the upper grades science would gradually assume more systematic form. Children would then be interested in problems and in the theoretic basis on which their solution depends. They will make and understand a fireless cooker, a camera, a wireless telegraph, and they will ultimately deal with phenomena and their relations in the most rigorous scientific form.

Would Develop Art Taste

"Languages are valuable only in so far as they are practically mastered," said Dr. Flexner. "A school trying to produce a resourceful modern type of educated man and woman would provide practical training in one or more modern languages."

The child's normal interest in romance, adventure, and facts would be utilized by "a realistic treatment of literature," the object being to develop interest and taste rather than to "train the mind," or make what Dr. Flexner stigmatized as a "make-believe literary scholar"; and the object of the training in music

and art would be to develop genuine and spontaneous appreciation rather than to bring about production. Physical education would be promoted by play facilities and sports as well as gymnastics.

"The man educated in the modern sense," said Dr. Flexner, "will be trained to know, to care about, and to understand the world he lives in, both the physical world and the social world."

Such an experiment would be hampered at the beginning by the necessity of working out through experiment and failure textbooks, apparatus, and methods, and the teachers in the school would have to learn their profession anew from actual practice before they could begin to serve as models to others who, like themselves, had been trained on traditional lines.

"But there are teachers," said Dr. Flexner, "whose efforts have already passed beyond conventional limits. With these the new enterprise would be started."

EVERY STUDENT LOVES HER WORK

College of Industrial Arts, Denton, Texas.—No doubt you have heard of or read articles concerning the Texas College of Industrial Arts and its work. But I shall try briefly to give you the student's viewpoint of the college, if you will allow me a little space.

I am only one among over 700 girls who attend the college to "learn to do by doing," but I feel safe in stating that every girl on the campus loves the college and its work. The courses here offered comprise every phase of work that a woman could do or would wish to do. There are ten courses in all, but I shall not endeavor to describe each one separately in so limited a time. However, I shall try to summarize the work done in the course that the majority of the students choose—that of household arts.

In this course every subject connected with household matters is thoroughly and systematically studied. Much stress is placed on the planning, preparing and serving of meals from the aesthetic and dietetic as well as from the economic standpoint. The domestic science laboratories are perfect in every detail, and are second to none in the country.

Besides domestic science there is domestic art included in this course. This embraces textiles, design, needlework, sewing, dressmaking, pattern making and millinery, all of which are well and carefully taught.

TRAINING FOR THE FOREIGN FIELD

During the Last Ten Years There Has Been a Wonderful Development of Systematic Training

Speaking before the recent convention of the National Foreign Trade Council, W. H. Lough, President of the Business Training Corporation of New York City, said:

There is one phase of this question to which I have given attention during the last few years and that is, what are you going to do for the young man who is going into foreign trade and is now working almost alone, or is working in a small department. He may be in a large business, and yet isolated or in a small department.

We have heard of the remarkable work carried on by the National City Bank of New York. I suppose that very few of us, as we have gone past the great building at 55 Wall Street, have ever stopped to consider that we were not looking merely at a bank, that we were also looking at a modern schoolhouse. For the truth is, as you have gathered from Mr. Schwedtmann's description, that the National City Bank is in large part a school as well as a business institution. Nor do the National City Bank and the United States Steel Corporation stand alone in that respect. There is at least one other great organization, the Standard Oil Company of New York, that devotes a great deal of money and thought to the training of its young men who are going into foreign trade in the Far East. In other lines of business activity—in selling, in accounting, in engineering—the last ten years, as you are probably well aware, have seen a wonderful development of systematic training given by corporations to their employees.

Now, the manager of a small corporation, or the head of a small foreign trade department, often figures that he cannot do just that thing, and therefore he will do nothing. If he figures that way, gentlemen, he is figuring in the wrong way. In an organization which is small enough so that the head of the department can come into personal contact with the young men who are working under him, it is true that the head of that department cannot organize classes and get up elaborate courses of lectures for his young men. But that disadvantage is more than offset by the incalculable advantage of being able to give them the benefit of his personal thought and attention.

Training a Source of Profit

I think we all realize by this time, from the example of those great institutions, that the training of young men in business by the corporation that employs those men is a demonstrated source of profits. More than that, it is a duty. He is not simply paying his employees their weekly salary to come in every morning, make out their bills of lading, write their routine letters, and do the detail work of the office. If he has the right conception of his relations to them, he feels himself to a large extent responsible for their development as business men; and if he is ever going to build a real organization, it can only be by giving his close and real attention to that duty.

You gentlemen who are the heads of foreign departments, or who have men working under you in any line of business, can accomplish great things with these men, things that will parallel, I dare say, anything that can be accomplished even by the National City Bank or the United States Steel Corporation. You can direct their reading along right lines; you can encourage them to take up educational work that may be open to them; you can talk with them; you can see that they are forming correct ideas as to the policy of your house and as to the big problems of foreign trade; and you can in that way build up around you a group of men that are not automatons, doing what you tell them and nothing more, but you can build up, gentlemen, a group of men who are real assistants, who will stand by you, and carry out your policies and build up the business of your concern.

Now, this is something that can be done, and it is in the spirit of modern business that it should be done. Perhaps you have in mind the old-time lawyer's office in which a young man entered as an apprentice and read law for a few years. You know that out of that personal contact with the man who was both his employer and his teacher, have come some of the greatest lawyers that this country has produced. The same thing is happening in many business offices. It is through the personal direction that you can give these men, encouraging them to read and to think, that may be developed some of the great business men of the future.

Training Should Accomplish Three Results

The kind of training you give them should aim toward accomplishing three distinct results. In fact, any kind of train-

ing should aim at these three results. The first is simply supplying knowledge, drilling those men working under your direction in doing the things that you want done in your way, or seeing that they get instruction in languages and in the other subjects in which they must have information. That result is important, of course; it is fundamental. The second object is to develop the right habits of thought, so they can work efficiently. Gradually they should take some of the burden of planning off of your shoulders; gradually they should begin to handle some of the difficult situations that arise in every business office. This second result, of course, also is fundamental.

There is a third result, however, which is often overlooked, and yet is equally important. Any kind of well-directed training of men can exert a tremendous power in stirring enthusiasm and in engendering the same kind of spirit among the young men who are working under you that permeates yourself, or that permeates such a convention as this, the spirit of intense interest, of concentration, of willingness to work night and day because of their interest in the subject. That spirit can animate also—in some instances does animate—a business office. It must be based, however, upon an understanding of the big problems which the manager is facing.

Enthusiasm Based on Knowledge

Those of you who play golf will agree, I think, that the man who knows nothing about the game except that he is trying to hit a ball is apt to regard it as a great deal of a bore. The man who sits down to play a game of bridge and doesn't know the rules of the game, finds that he is in for a very tiresome evening. The young man who goes into a business office and does not know what he is driving at, who is making out bills of lading and doesn't know what for, who is drawing drafts and doesn't know on whom they are drawn or why they are drawn, that man does not know the rules of the business game and he is not interested. One great and important object, therefore, is that of giving such a knowledge of the need of foreign trade, of its basis, of its fundamental principles, that even the young men who are taking their first step will become enthused and active. They must feel the same keen interest you feel before they can become really able assistants.

I believe that every man here who has young men working under him and who is not already looking after their develop-

ment and devoting considerable of his time and his thought to that end, just as the great institutions that have been mentioned devote a part of their time and their capital to the development of their people, that that man is making a mistake which he should make haste to remedy. Only the manager who looks after the development of his subordinates—as well as his own development—is really keeping step with the rapid forward movement of American business. He is doing a great thing for his employes, for himself, for his concern and for his country. Out of the efforts of such men will grow the efficient American organizations which will be fitted to go into the world's markets and successfully battle for our national interests and prosperity.

URGES INDUSTRIAL COURSE IN CLEVELAND

Cleveland should provide a two-year industrial school course to fit school children who do not expect to finish school, for the building trades industries, according to the report on the building trades made by the Cleveland Foundation educational survey.

The building trades report was prepared by Frank L. Shaw. It declares few of the boys who enter the building trades graduate from the eighth grade in the public schools and, in order they may obtain training that will help them in their work, urges these special general changes in the public school curriculum be made:

Increased training in industrial arithmetic, beginning in the seventh grade.

Introduction of courses which will give the pupil at least a general understanding of elementary sciences, such as chemistry and physics.

Giving of courses in industrial information so that when the boy enters trade he will understand the terms and be able to work out the trade formulas.

Giving of general courses in general shop work.

In order that the candidate for the building trades shall be sure to get the benefit of this training it is urged the pupils be retarded less in the lower grades so they will reach the higher studies before they come of legal working age.

The report says it is not feasible to have separate classes in the building trades in the elementary schools, because each school averages but about two pupils each year that go into the trades.

GENERAL EDUCATIONAL NOTES

Speaking at Worcester, Mass., J. A. Puffer said: "The boy that has done the most definite thinking toward his vocation is the best student. Vocational training is the best vocational guidance. This means that by a system of elimination the boy discovers what his life work is to be."

In an address before the February seniors of the San Antonio, Texas, high school a short while ago, Charles S. Meek, superintendent of city schools, made the statement that in the future the curriculum of the San Antonio public schools was to be shaped so as to meet the needs of the 96 per cent. of the students who take up practical courses and not for the 4 per cent. who come in for professional training. Probably the majority of his audience thought that it was almost an impossibility to give a boy the same training, in a few years at school, that had taken his father years to learn. But if they will stop, almost any day in the school week, at the new manual training building on West Romana street and see what boys and girls are doing they will readily admit the plan is feasible, says the *San Antonio Light*.

Governor Ralston said recently he will recommend to the next Legislature the passage of a bill looking to the establishment in Indiana of an industrial school for negro children.

Dr. J. P. Kerr, president of the city council, in an address on "City Management" before members of the Mocar Club of Pittsburgh, suggested the establishment of courses in municipal training in the universities of the country as one means of obtaining a higher grade of service in city government.

Delaware has appointed a commission to report on vocational education for minors.

The teaching of the trade schools has invaded all the others more or less and the call is now for some practical direction to all teaching in the schools so that both boys and girls shall be helped in the direction in which they wish to go, when through with school, says the Bridgeport, Conn., *Standard*. When the boy knows just what line he wishes to follow, the trade school gives him the chance to get the start he needs, and it gives him a big advantage over the boy who has not had the training. But for the girl the provision, although fairly good, and growing better all the time, is not so ample.

The practical education of the children in the public schools of Pittsburgh was demonstrated recently when the eighth-grade pupils from the Teachers' Training School spent the morning

studying banking. The class first visited a downtown trust company, where an officer of the company gave a short talk on the different kinds of banks and what is necessary to open an account, illustrating his talk with the working force.

The Women's Club, Board of Education and Chamber of Commerce of Danville, Ill., are co-operating with the labor unions for a new industrial night school at that place.

Mr. E. G. Allen, one of the directors of the Cass Technical High School at Detroit, Mich., in a recent statement said, "We can reduce the bread and soup line of Detroit 50 per cent. if we are given the \$450,000 requisite to enlarge our school by the building of a separate girls' department across High street from our present location."

"In every part of this country, industrial training has come to be pointed out as one of the most important signs of progress noted in the growth of the educational system, and in the local schools, where new features in industrial work have been added each year," says the Topeka, Kans., *Capitol*.

A committee from the Senate and a like committee from the House has completed an investigation of the higher educational institutions of the State of Mississippi. The report of the joint committee will be preliminary to a proposed enlargement of the educational system of that state.

"What we need is a new system of schools to supplement the work of the present school system and to serve as a connecting link between education and industry. Ninety per cent. of the youth of our country do not go through high school; 66 per cent. do not even graduate from elementary schools. The great majority of our children leave school at the ages of 14 or 15, with no adequate preparation for their life's work. It is for these we must revise our public school system," declared M. J. Caples, chairman of the Chamber of Commerce Vocational Education Committee of Columbus, Ohio, in a statement made in answer to those who oppose a survey of the Columbus schools on the ground that "we have as good schools as elsewhere."

S. W. Straus, a Chicago banker, who is President of the American Society for Thrift, in a recent address, said: "The most vital question in America today is individual preparedness; not individual preparedness for war, but individual preparedness for anything that may come."

New York City's latest venture, by way of helping girls, comes under the department of education and is called simply

the Trade Extension Rooms. Any girl old enough to have her working papers, or any woman, may enroll, and during a period of several weeks receive vocational tests calculated to help her choose and enter the trade for which she is best fitted. This extension work is an offshoot of that most excellent of municipal enterprises, the Manhattan Trade School.

Superintendent of Schools Otto has introduced a novel method of instruction in the schools of Marshfield, Wis. The plan is to have the students gather a certain evening and discuss some line of business that might be followed after finishing the high school course. Prominent men in that line of business talk to the boys regarding the requirements. The first discussion covered the banking business. The next gathering will cover newspaper work. The work is so popular with the boys that the girls will form a club along similar lines.

The Girls' Trade School of Worcester, Mass., has opened a new department in which girls will be taught the trade of home-making.

John D. Shoop, superintendent of the Chicago schools, was the principal speaker at a recent meeting of the Illinois School Teachers' Association. He reviewed what he termed was the unprecedented growth of manual arts courses in the schools of this country, and urged the teachers to apply themselves to acquiring first-hand knowledge of these branches. "The manual arts courses number among the most important in the school curriculum," he said. "This statement is borne out by the installation of these courses in practically every school in the country."

Part-time co-operation classes for department store employees of Newark, N. J., became a reality on March 13.

Students of the Boys' Trade School at Worcester, Mass., may be sent to Cincinnati to get practical experience in machine shops along the line of the plan by which Cincinnati university students are employed. Mayor Wright, of that city, at a meeting of persons interested in enlarging the trade school, read a letter from L. B. Weber, of the Lodge & Shipley Machine Tool Company of Cincinnati, recommending the work of the boys in the Worcester school. Mr. Weber said, recently, that work for the company had been done in the school. He said further that the firm would employ students from the school, for experience, if they were sent on.

The free night school of the Georgia School of Technology has broken all attendance records of past years for this session. The free night school, offering free advantages for advanced

technological education along all lines, has opened up a big opportunity for Georgia boys and men who otherwise could not obtain such education, says the *Atlanta Journal*, and has been the means of finding advancement for men already at work, and constructive employment for others.

The annual report of directors of the Buffalo, N. Y., public library notes the "increasing demand for books pertaining to industrial pursuits as a means of practical education."

First steps toward gathering data concerning the vocational needs of Washington's school children are being taken. All teachers were instructed to file a record of pupils leaving school before their courses were completed, with complete information about what line of work they intended to follow. This is done to shed light on the vocational aim of school pupils as well as to study the reasons for their leaving school with a view to checking these premature departures.

Illiteracy in Latin-American countries reaches as high as 80 per cent. of the population in some instances, and in no case is less than 40 per cent., according to the report of the Commission on Education, presented to the Congress on Religious Work in Latin-America, at its recent session. "In few nations is illiteracy so pronounced," the report says. "In some countries, such as Ecuador, it is impossible to arrive at any accurate estimate. In such advanced countries as Brazil, some estimates reach as high as 80 per cent. In view of the fact that in most of the Southern republics large masses of the populations are Indians who have scarcely emerged from barbarism, the commission sees no possibility of any material advance in education in the immediate future. The great need, it points out, is for some industrial or agricultural training.

An agricultural car is touring Georgia, under the auspices of the Georgia State Industrial College, the United States Department of Agriculture and Central of Georgia Railway, has been visited by an exceedingly large concourse of colored farmers and many white people.

The operation of co-operative industrial courses between the high schools and factories of the State of New Jersey is provided for in a bill introduced in the Assembly by Assemblyman George H. Dalrymple, of Passaic City. It is a supplement to the child labor law. In Passaic City there is a co-operative industrial course under which boys work one week in the local mills at their chosen trade, and the alternate week study the course in the high school. Some of the boys in the course are not yet sixteen years old, and so under the child labor law cannot work in the factories. The Dalrymple bill will authorize

the State Commissioner of Labor and the Commissioner of Education to issue certificates to pupils over 14 years of age, permitting them to be employed part-time in a factory, workshop or mill designated by the State Board of Education, said employment to be considered as a part of the schooling of these children.

Henry D. Hervey, superintendent of schools, was the speaker at a recent meeting of the Rotary Club of Auburn, N. Y. "Any system of education based on the theory that all the students are going to college is a vicious system," said the speaker. "To produce a system of education unsuited to a considerable number of pupils is a sheer waste of time and money. Vocational education is not a fad. It was officially approved by the Board of Regents in 1910 and is in use in places both in and outside this state. A bill providing for vocational education has been introduced into the House of Representatives by Representative Hughes. A survey of industrial conditions in Auburn is now being made. Returns from seventeen of our large manufacturing establishments show 2,220 skilled workers and 38,022 unskilled workers employed. Twenty-three employees are between the ages of 14 and 16 and 217 between 16 and 18. This shows that there is little demand for boys under 16 years old in factories. They should be in school learning useful and practical lessons."

The opening of the second semester of the Lincoln, Neb., public schools has seen the adoption of a complete prevocational program in the courses of study. The program for the first semester was more or less tentative, but resulted this year in a definite and thorough course of study. Shop work for boys and the domestic arts for girls are now required subjects in the ninth grades of the prevocational schools.

The largest entering class in the history of the Philadelphia Trades School was enrolled February 1st, necessitating the use of the annex at 12th and Locust streets. This old building, which formerly housed the entire Trades School, is taxed to capacity by the freshman class. The upper classes, comprising three-fourths of the school, fill the building at 17th and Wood streets, which was formerly the home of the Central Manual Training High School. The increase in enrolment is due in large measure to the recent action of the Board of Education in making the entrance requirements to the Trades School identical with those to the high schools. Graduates are in great demand. Of the class which finished its work January 24th all are employed, and the school office has on file several applications which came too late to be filled.

Committees of The National Association of Corporation Schools 1915-16

Trade Apprenticeship Schools

Mr. J. W. L. Hale, *Chairman*,
Massachusetts Board of Education,
Boston, Mass.
W. L. Chandler,
Dodge Manufacturing Co.,
Mishawaka, Indiana.
J. M. Larkin,
Fore River Shipbuilding Corporation,
Quincy, Mass.
F. W. Thomas,
Atchison, Topeka & Santa Fe Railway,
Topeka, Kansas.
Paul V. Farnsworth,
Cadillac Motor Car Co.,
Detroit, Mich.
Thomas G. Gray,
Southern Pacific Co.,
Sacramento, Cal.

Advertising, Selling and Distribution Schools

Dr. Lee Galloway, *Chairman*,
New York University,
New York, N. Y.
Professor M. T. Copeland,
Harvard Business School,
Cambridge, Mass.
O. B. Carson,
American Optical Co.,
Southbridge, Mass.
Frank L. Glynn,
Box 246,
Madison, Wis.
J. T. Spicer,
Thomas Maddock's Sons Co.,
Trenton, N. J.
F. E. Van Buskirk,
Remington Typewriter Co.,
New York, N. Y.
W. W. Kincaid,
The Spirella Co.,
Meadville, Pa.
H. G. Carnell,
The National Cash Register Co.,
Dayton, Ohio.

Accounting and Office Work Schools

George B. Everitt, *Chairman*,
National Cloak and Suit Co.,
New York, N. Y.
Dr. Louis I. Dublin,
Metropolitan Life Insurance Co.,
New York, N. Y.
R. H. Puffer,
Larkin Co.,
Buffalo, N. Y.
H. A. Hopf, Phoenix Mutual Life Insurance Co.,
Hartford, Conn.
Frederick Uhl,
American Telephone & Telegraph Co.,
New York, N. Y.
William R. DeField,
Montgomery Ward & Co.,
Chicago, Ill.

Special Training Schools

J. W. Dietz, *Chairman*,
Western Electric Co.,
Chicago, Ill.
J. E. Banks,
American Bridge Co.,
Ambridge, Pa.
Fred R. Jenkins,
Commonwealth Edison Co.,
Chicago, Ill.

Special Training Schools Continued.

W. K. Page,
Addressograph Co.,
Chicago, Ill.

Retail Salesmanship

James W. Fisk, *Chairman*,
Lord & Taylor, 5th Ave. & 39th St.,
New York, N. Y.
Miss Beulah Kennard,
49 Lafayette Street, City Building
New York, N. Y.
Miss Lilian Meyncke,
The Rike-Kumler Co.,
Dayton, Ohio.
H. G. Petermann,
United Cigar Stores Co.,
New York, N. Y.
Ralph W. Kinsey,
Dives, Pomeroy & Stewart,
Reading, Pa.

Employment Plans

F. P. Pitzer, *Chairman*,
Equitable Life Assurance Society,
New York, N. Y.
N. F. Dougherty,
The Pennsylvania Railroad Co.,
Philadelphia, Pa.
Philip J. Reilly,
Dennison Manufacturing Co.,
Framingham, Mass.
Edward B. Saunders,
Simonds Manufacturing Co.,
Fitchburg, Mass.
W. M. Skiff,
National Lamp Works, General Electric Co.,
Nela Park, Cleveland, Ohio.

Public Education

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